

## IT IS CLAIMED:

1. A Hepatitis E Virus (HEV) polypeptide composition, consisting of at least one polypeptide derived from the carboxy-terminal 549 amino acids of HEV open reading frame (ORF) 2.
2. A polypeptide composition of claim 1, where at least one polypeptide contains a carboxy terminal deletion of up to about 24 carboxy terminal amino acids of said 549 amino acid HEV ORF2 polypeptide.
3. A polypeptide composition of claim 1, where said composition contains a polypeptide having the sequence presented as SEQ ID NO:15 or a homologous sequence thereto.
4. A polypeptide composition of claim 1, where said composition contains a polypeptide having the sequence presented as SEQ ID NO:16 or a homologous sequence thereto.
5. A polypeptide composition of claim 1, where said composition contains a polypeptide having the sequence presented as SEQ ID NO:25 or a homologous sequence thereto.
6. A polypeptide composition of claim 1, where said composition contains a polypeptide having the sequence presented as SEQ ID NO:26 or a homologous sequence thereto.
7. A polypeptide composition of claim 1, where said composition contains a polypeptide having the sequence

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open reading frame 2, said nucleic acid sequence inserted into an expression vector, wherein said nucleic acid sequence is operably linked to a promoter able to initiate transcription in a selected host cell, and

5           said expression vector is carried within the host cell.

14. An expression system of claim 13, where said expression vector is a baculovirus expression vector and  
10           said host cell is an insect cell.

15. A Hepatitis E Virus (HEV) polypeptide composition produced by a process comprising,  
          culturing an insect cell containing an expression  
15           vector of claim 11 under conditions sufficient to express a polypeptide encoded by said nucleic acid.

16. A composition of claim 15, wherein at least one polypeptide of the composition has an amino acid sequence selected from the group consisting of SEQ ID NO:15, SEQ ID NO:16, SEQ ID NO:25, SEQ ID NO:26, SEQ ID NO:27, SEQ ID NO:28, and homologous sequences therewith.  
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17. A Hepatitis E Virus (HEV) polypeptide composition produced by a process comprising,  
25           a) obtaining an HEV capsid derived antigen having at least 549 carboxy terminal amino acids of an HEV capsid protein; and  
          b) incubating the antigen with a baculoviral  
30           infected lysate under conditions sufficient to cleave carboxy terminal sequences of the HEV capsid derived antigen.

18. A method of producing a Hepatitis E Virus (HEV) polypeptide composition, comprising the steps of:  
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Sub: D  
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culturing a cell containing the expression vector of claim 11 under conditions sufficient to express a polypeptide sequence encoded by said nucleic acid.

19. A method of detecting hepatitis E virus infection in an individual, comprising:

a) reacting a serum sample taken from the individual with the Hepatitis E Virus (HEV) polypeptide composition of claim 1; and

10 b) examining a polypeptide of the composition for the presence of bound antibody.

15 20. The method of claim 18, wherein polypeptides of the HEV polypeptide composition are attached to a solid support, said reacting includes contacting such serum with the support and said examining includes reacting the support and bound antibody with a reporter-labeled anti-human antibody.

20 21. A kit for ascertaining the presence of antibodies to HEV in a serum sample taken from an individual, comprising:

25 a solid support with surface-bound antigens wherein the surface-bound antigens are polypeptides of the HEV polypeptide composition of claim 1.

30 22. A vaccine composition used in immunizing an individual against Hepatitis E Virus (HEV) comprising, an HEV polypeptide composition of claim 1 in a pharmacologically acceptable carrier.

35 23. A vaccine composition of claim 22, where at least one polypeptide of the composition has an amino acid sequence selected from the group consisting of SEQ ID NO:15, SEQ ID NO:16, SEQ ID NO:25, SEQ ID NO:26, SEQ

ID NO:27, SEQ ID NO:28, and homologous sequences therewith.

- 5           24. A method of inhibiting infection of an individual by HEV, comprising:
- administering to the subject a vaccine composition of claim 22 in a therapeutically effective amount.

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